# Legendary Sports Stats

**Kit contains:**

- 1 cup
- 1 bouncy ball
- yarn

**You will need:** pencil and a calculator (optional).

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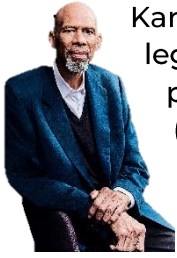
# Let's start with a living legend...



Kareem Abdul-Jabbar is a basketball legend, activist, and author of some pretty awesome books (*Becoming Kareem, Mycroft Holmes,* etc.). During his 20 NBA seasons, Kareem scored 38,387 points over 1,560 games. Doing the math,

**38,387 points ÷ 1,560 games**
**≈ 24.6 points per game**

Kareem's free throw percentage was 72.1% That means that he sunk about 72 out every 100 free throws he ever attempted. In addition to being amazing achievements, the numbers we collect about Kareem's basketball are statistics.

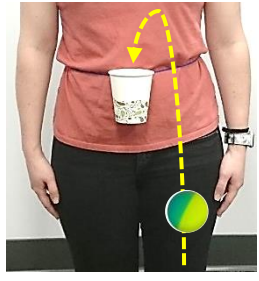
**Statistics** is the mathematical practice of collecting, organizing, analyzing, and interpreting numerical **data** (information we can observe and measure).

# Now we generate data...

We can gather data without being sports greats. Let's set up the experiment.

**Step 1.** Thread your yarn through the holes in the cup as shown.

**Step 2.** Tie the cup around your waist.



Now bounce the ball once on the ground and try to get it to land in the cup.

- **Easy version:** low bounce
- **Hard version:** super high-above-your-head bounce

There is a data collection table on the back page. Each time you attempt a bounce, make a tally mark on the table. Five tally marks are bundled together, kind of like the thumb on your hand.

# Bounce Baskets

| Attempts | Successes | Misses |
|---|---|---|
| | | |

1. Attempt 10 bounce baskets.
   a. How many baskets did you make?
   b. Calculate your bounce basket percentage:
      **Divide:** successes ÷ attempts
      **Multiply** x 100
      Stick a **%** at the end

2. Attempt 40 more bounce baskets.
   a. How many total baskets did you make?
   b. Calculate your new bounce basket %.

3. Keep going until you hit 100 attempts.
   Re-calculate and see how the stats changed.

*So... are you a legend?*